

AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheet" of drawings includes changes to Figure 2.

The attached "Replacement Sheet" replaces the originally filed Figure 2 sheet.

Attachment: Replacement Sheet

REMARKS

Claims 1 and 10-16 are now pending in the application. Applicants have incorporated the allowable subject matter of Claim 3 into independent Claim 1. Claim 1 is now in condition for allowance. Claims 2-9 and 17-18 are presently cancelled without prejudice and disclaimer. Applicants reserve the right to file one or more continuation applications incorporating the subject matter of the presently pending and cancelled claims. Claims 13-15 are believed to allowable as the subject matter of the invention of group I is now found allowable. (See Office Action dated 04/22/2009 at page 2). In other words, Claims 13-15 depend from independent Claim 1, which is now amended to recite the allowable subject matter of Claim 3. Since Claims 13-15 include all of the allowable subject matter of Claim 1, it is believed that they are also in condition for allowance. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

SPECIFICATION

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). In the instant case, the requirements of 37 CFR 1.181-1.825 are not met because the application is alleged to contain sequences, that were not assigned a sequence identifier in fig. 1 and in fig. 2 (i.e., sequence alignment comprising polypeptide sequences of 4S-lim and 1,8-cin).

Applicants have inserted proper sequence identifiers in the replacement paragraphs describing the original "Brief Description Of The Figures" on page 8, lines 3

and 4. It is believed that the inclusion of the sequence identifiers in the description of the figures of 4S-lim and 1,8-cin satisfy the requirements under 37 CFR 1.821 – 1.825, in particular 37 CFR 1.821(d) as the sequence identifiers are included in the “text of the description”. Figure 1 shows the sequence of a polynucleotide encoding GES as is appropriately labeled as SEQ ID. NO:1 in the brief description of FIG. 1 on page 7, line 30.

DRAWINGS

The drawings in Fig. 2 are objected to under 37 CFR 1.83(a) because they allegedly fail to show the required details as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). The drawings are objected to because the alignment in figure 2 is alleged not to clearly show the amino acids that are similar or identical.

Applicants have attached a revised drawing for the Examiner's approval. In the "Replacement Sheet" Applicants have provided an amended Fig. 2 showing proper shading of the amino acid residues that share identity or similarity between the two-compared terpene synthases of SEQ ID NO:3 and 4 and GES of SEQ ID NO:1.

Applicants respectfully request reconsideration and withdrawal of the present objection to Fig. 2.

REJECTION UNDER 35 U.S.C. § 112

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Claim 5 has been cancelled herein and thus renders the instant rejection moot. Applicants respectfully request reconsideration and withdrawal of the present rejection.

Claims 1, 4, 5, 10-12 and 16 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have amended Claim 1 to incorporate all of the claim limitations of the allowable Claim 3. As such, Claim 1 is in condition for allowance. Claims 10-12 and 16 also depend on Claim 1, and each one of these claims require an isolated polynucleotide comprising a nucleic acid sequence encoding the amino acid sequence of SEQ ID NO:2. Applicants have cancelled Claims 4 and 5 herein and therefore render this rejection moot as to these claims. None of the claims presently pending recite homologous sequences or fragments, derivatives or analogs and as such Claims 10-12 and 16 contain subject matter that was fully described in the specification as filed, reasonably conveying to one skilled in the art that the Applicants were in possession of the claimed inventions of Claims 10-12 and 16.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the present rejection of Claims 1, 4, 5, 10-12 and 16 under 35 U.S.C. §112, first paragraph.

Claims 1, 2, 4, 5, 10-12 and 16 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for an isolated polynucleotide of SEQ ID NO:1 that encodes the polypeptide of SEQ ID NO:2 with geraniol synthase activity (GES) does not reasonably provide enablement for any polynucleotide encoding polypeptide variants with 60%, 70%, 80% or 90% sequence identity to a polynucleotide encoding SEQ ID NO:2 or fragments and derivatives or analogues of SEQ ID NO:2 that retains GES activity. Furthermore the specification does not provide enablement on how to use the full scope of polynucleotides sequences of any size and level of identity that can hybridize under any hybridization condition with the polynucleotide of SEQ ID NO:1 where said sequences encodes an amino acid sequence with or without enzymatic activity (claim 2(d)).

Applicants appreciate the Examiner's finding that the specification is enabling for an isolated polynucleotide of SEQ ID NO:1 that encodes the polypeptide of SEQ ID NO:2 with geraniol synthase activity (GES). Applicants respectfully submit that Claims 1, 10-12 and 16 are all enabled by the specification as originally filed, in particular, the subject matter thus described by the Examiner on page 6 of the Office Action. Since Claims 2, 4 and 5 have been cancelled; the present rejection is rendered moot as to these cancelled claims.

Accordingly, the Applicants respectfully request the Examiner to reconsider and withdraw the rejection under 35 U.S.C. §112, first paragraph of Claims 1, 2, 4, 5, 10-12 and 16.

REJECTION UNDER 35 U.S.C. § 102

Claim 2 is rejected under 35 U.S.C. §102(b) as being anticipated by Chappell et al. (U.S. Patent No. 6,559,297 filed June 29, 2001, herein referred to as "*Chappell*") or Chappell et al. (U.S. Patent No. 6,468,772 filed on September 14, 1999, herein referred to as *Chappell II*). *Chappell* teaches a polynucleotide sequence (SEQ ID NO:21) encoding a monoterpenes synthase that shows 52.7% best local similarity to the polynucleotide of SEQ ID. NO:1.

Claim 2 is also rejected under 35 U.S.C. §102(b) as being anticipated by SEQ ID NO:1 in EuClaire et al. (U.S. Patent No. 6,291,745 filed on October 14, herein referred to as *EuClaire*) (see SCORE results). *EuClaire* teaches a polynucleotide sequence encoding a monoterpenes synthase that shows 52.7% best local similarity to the polynucleotide encoding the geraniol synthase of SEQ ID NO:2.

Applicants have cancelled Claim 2, thus rendering the present rejection of Claim 2 under 35 U.S.C. §102(b) moot.

AMENDMENTS TO THE SEQUENCE LISTING AND COMPUTER READABLE FORM

Applicants hereby provide substitute sheets of the written Sequence Listing and a corresponding substitute copy of the computer readable form of said written

Sequence Listing. The substitute written Sequence Listing incorporates the new SEQ ID NO:3 and 4 as amended herein. Support for the amendments made to the written Sequence Listing can be found in Figure 2. No new matter has been added.

Applicants' representative hereby provides an electronic copy of a substitute copy of the computer readable form of the substitute copy of the Sequence Listing for the above-referenced patent application in compliance with the requirements of 37 CFR 1.821-1.825. The substitute copy of the computer readable form includes no new matter.

I hereby state that the substitute copy of the computer readable form, submitted in accordance with CFR 1.825(b), is the same as the substitute copy of the Sequence Listing.

I hereby state that the content of the sequence listing information recorded in computer readable form is identical to the written sequence listing and includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

I hereby state that the submission, filed in accordance with 37 CFR 1.821(g) herein does not include new matter or matter which goes beyond the disclosure in the international application PCT/US2004/040321.

I hereby state that the amendments, made in accordance with 37 CFR 1.85(a), included in the substitute copy of the written Sequence Listing include recitation of two sequence identifiers in the brief description of the figures and does not include any new matter not recited in the specification as filed. I hereby state that the substitute copy of the Sequence Listing does not include new matter.

Applicants' representative further requests entry of an amendment to the specification by replacing the originally filed Sequence Listing with the Substitute copy of the written Sequence Listing submitted herewith into the specification after line 6 on page 29 of the originally filed specification. The amendment to the Sequence Listing presented herein is supported by the originally filed application.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,
HARNESS, DICKEY & PIERCE, P.L.C.

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